

ABSTRACT

The invention aims to provide, an illumination apparatus which, even if an object to be detected is of a mirror surface shape and of a concavity and convexity shape, can carry out appropriate illumination which corresponded to it, over trying to realize low cost and miniaturization with a simple configuration, and accordingly enables to recognize an object to be detected without an error, and a recognition apparatus and a component mounting apparatus which were equipped with this.

In this invention, an annular diffusion plate 14, a fixing plate 15 having light sources for directional light 12 and light sources for diffused light 13 annularly on the upper and lower surfaces thereof, and an annular reflective plate 17 reflecting light from the light sources for directional light 12 to the detected object 10 are disposed in a case 11 in order from the side of the detected object 10. And through-holes 18, 21, 22 for passing light to an image pickup camera 20 therethrough are provided. The diffused light L1 can be generated by radiating the light from the light source for diffused light 13 to the detected object 10 through the diffusion plate 14, the directional light L2 can be generated by radiating the light from the light source for directional light 12 on the detected object 10 after reflecting on the reflective plate 17.